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CLAIMS

What is claimed is:

1. A method for co-operative thermal management of a plurality of independent electronic devices housed within a common enclosure, comprising:

designating a priority number for each of said plurality of independent electronic devices, wherein each of said plurality of independent electronic devices has a thermal controller; and

measuring a temperature of each of said plurality of independent electronic devices and for each of said plurality of independent electronic devices:

determining if said measured temperature exceeds a threshold value for said independent electronic device; and

initializing a count-down value to said designated priority number of said independent electronic device in response to a determination that said measured temperature exceeds a threshold value.

- 2. The method for co-operative thermal management as recited in Claim 1, wherein said initializing a count-down value further includes initiating an interval timer.
- 3. The method for co-operative thermal management as recited in Claim 1, wherein said initializing a count-down value further includes waiting a first predetermined period of time before repeating said measuring a temperature of said independent electronic device in response to a determination that said measured temperature does not exceed said threshold value.

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4. The method for co-operative thermal management as recited in Claim
2, wherein said measuring a temperature further includes:
determining if said count-down value is equal to zero; and
powering-down said independent electronic device in response to a
determination that said count-down value is equal to zero, otherwise
waiting a second predetermined period of time before obtaining a second
temperature measurement of said independent electronic device and determining if said
second temperature measurement exceeds said threshold value.

5. The method for co-operative thermal management as recited in Claim 4, wherein said measuring a temperature further includes:

determining if said interval timer has expired in response to a determination that said second temperature measurement exceeds said threshold value; and

decrementing said count-down value, reinitiate said interval timer and repeat said determining if said count-down value is equal to zero in response to a determination that said interval timer has expired, otherwise repeat waiting a second predetermined period of time before obtaining a temperature measurement.

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6. A method for co-operative thermal management of a plurality of independent electronic devices housed within a common enclosure, comprising:

designating a priority number for each of said plurality of independent electronic devices, wherein each of said plurality of independent electronic devices has a service processor that remains operational when said electronic device is powered down; and

measuring a temperature of each of said plurality of independent electronic devices and for each of said plurality of independent electronic devices:

determining if said measured temperature exceeds a threshold value for said independent electronic device; and

initializing a count-down value to said designated priority number of said independent electronic device in response to a determination that said measured temperature does not exceed a threshold value.

- 7. The method for co-operative thermal management as recited in Claim 6, wherein said initializing a count-down value further includes initiating an interval timer.
- 8. The method for co-operative thermal management as recited in Claim 7, wherein said measuring a temperature further includes:

determining if said count-down value is equal to zero; and

powering-up said independent electronic device in response to a determination that said count-down value is equal to zero, otherwise

waiting a second predetermined period of time before obtaining a second temperature measurement of said independent electronic device and determining if said second temperature measurement exceeds said threshold value.

9. The method for co-operative thermal management as recited in Claim 8, wherein said measuring a temperature further includes:

determining if said interval timer has expired in response to a determination that said second temperature measurement does not exceed said threshold value; and

decrementing said count-down value, reinitiate said interval timer and repeat said determining if said count-down value is equal to zero in response to a determination that said interval timer has expired, otherwise repeat waiting a second predetermined period of time before obtaining a temperature measurement.

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1	10. An electronic device, comprising:
2	a designated priority number; and
3	a thermal controller, including:
4	means for measuring a temperature of said electronic device;
5	means for determining if said measured temperature exceeds a
6	threshold value for said electronic device; and
7	means for initializing a count-down value to said designated priority
8	number of said electronic device.

- 11. The electronic device as recited in Claim 10, wherein said thermal controller is embodied in a service processor that remains operational when said electronic device is powered down.
- 12. The electronic device as recited in Claim 10, wherein said thermal controller powers down said electronic device in response to a determination that said measured temperature exceeds said threshold value and said count-down value is equal to zero.
- 13. The electronic device as recited in Claim 11, wherein said service processor powers up said electronic device in response to a determination that said measured temperature does not exceed said threshold value and said count-down value is equal to zero.
- 14. The electronic device as recited in Claim 11, wherein said electronic device is a server blade.

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15. A data processing system, comprising:

an enclosure; and

a plurality of independent electronic devices housed within said enclosure, wherein each of said plurality of independent electronic devices having:

- a designated priority; and
- a thermal controller, including:

means for measuring a temperature of said independent electronic device;

means for determining if said measured temperature exceeds a threshold value for said independent electronic device; and means for initializing a count-down value to said designated priority number of said independent electronic device.

- 16. The data processing system as recited in Claim 15, further comprising: a backplane coupled to said plurality independent electronic devices; and a plurality of fans.
- 17. The data processing system as recited in Claim 15, wherein said thermal controller is embodied in a service processor that remains operational when said independent electronic device is powered down.
- 18. The data processing system as recited in Claim 15, wherein said thermal controller powers down said independent electronic device in response to a determination that said measured temperature exceeds said threshold value and said count-down value is equal to zero.

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- 19. The data processing as recited in Claim 17, wherein said service processor powers up said independent electronic device in response to a determination that said measured temperature does not exceed said threshold value and said count-down value is equal to zero.
- 20. The data processing system as recited in Claim 15, wherein said independent electronic device is a server blade.

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21. A computer-readable medium having stored thereon computer executable instructions for implementing a method for co-operative thermal management of a plurality of independent electronic devices housed within a common enclosure, said computer executable instructions when executed by one of said plurality of independent electronic devices perform the steps of:

designating a priority number for said independent electronic device, measuring a temperature of said independent electronic device;

determining if said measured temperature exceeds a threshold value for said independent electronic device; and

initializing a count-down value to said designated priority number of said independent electronic device and initiate an interval timer in response to a determination that said measured temperature exceeds a threshold value.

22. The computer-readable medium as recited in Claim 21, wherein said computer executable instruction further perform the steps of:

determining if said count-down value is equal to zero;

powering-down said independent electronic device in response to a determination that said count-down value is equal to zero, otherwise

waiting a predetermined period of time before obtaining a second temperature measurement of said independent electronic device and determining if said second temperature measurement exceeds said threshold value;

determining if said interval timer has expired in response to a determination that said second temperature measurement exceeds said threshold value; and

decrementing said count-down value, reinitiate said interval timer and repeat said determining if said count-down value is equal to zero in response to a determination that said interval timer has expired, otherwise repeat waiting a predetermined period of time before obtaining a temperature measurement.

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23. A computer-readable medium having stored thereon computer executable instructions for implementing a method for co-operative thermal management of a plurality of independent electronic devices housed within a common enclosure, said computer executable instructions when executed by one of said plurality of independent electronic devices perform the steps of:

designating a priority number for said independent electronic device, measuring a temperature of said independent electronic device;

determining if said measured temperature exceeds a threshold value for said independent electronic device; and

initializing a count-down value to said designated priority number of said independent electronic device and initialize an interval timer in response to a determination that said measured temperature does not exceed a threshold value.

24. The computer-readable medium as recited in Claim 23, wherein said computer executable instruction further perform the steps of:

determining if said count-down value is equal to zero;

powering-up said independent electronic device in response to a determination that said count-down value is equal to zero, otherwise

waiting a predetermined period of time before obtaining a second temperature measurement of said independent electronic device and determining if said second temperature measurement exceeds said threshold value;

determining if said interval timer has expired in response to a determination that said second temperature measurement does not exceed said threshold value; and

decrementing said count-down value, reinitiate said interval timer and repeat said determining if said count-down value is equal to zero in response to a determination that said interval timer has expired, otherwise repeat waiting a predetermined period of time before obtaining a temperature measurement.